

REMARKS

"Objected To" Claims

In the Office Action mailed on August 31, 2007, the Examiner objected to claims 5 and 12 as being dependent on a rejected base claim, but otherwise would be allowable if rewritten in independent form. These two claims have been placed into independent form by this Amendment document, and they include the subject matter of their respective (unamended) base claims (i.e., claims 1 and 7, respectively).

Prior Art Rejections

In the above-identified Office Action, the Examiner rejected claims 1-4, 6-11, and 13-16 as being obvious in view of the combination of Greenman (US 2003/0179075) and Barrett (US 5,046,084). The Examiner stated that Greenman disclosed most of the elements of the pertinent independent claims (i.e., claims 1, 7, and 13) but failed to disclose a portable memory device, which Barrett did disclose. However, Applicant would like to point out that Greenman does not disclose generating a “diversified access code” anywhere in the Greenman disclosure. According to the Examiner, Greenman discloses generating a diversified access code in paragraph [0052]. However, this paragraph in the Greenman published application only discusses an encryption algorithm, and does not specify anything about using a diversified access code.

It should be noted that a diversification algorithm is different from an encryption algorithm. A diversification function is more specialized, in that the output of a diversification function is not predictable if one input value is incremented while the other input (or seed value) is unknown, even if one knows the output (result) of the previous set of inputs. In other words, the output data cannot be “reversed” to learn the values of the input data, unlike a standard encryption algorithm. The use of diversified values are discussed in the instant application on page 25, lines 5-14. A detailed example of a method that diversifies PIN information in the present invention is presented on page 28, line 4 through page 29, line 20 of the instant application. This example, of course, is not the only way to create a diversified value, but

discloses an exemplary methodology for generating a diversified numeric value for use in an electronic lock box system that uses an epoch time counter.

Claims 7 and 17

Please note that Applicant is not merely reciting a diversification function in his claims, but is amending certain claims to include the diversification result in a more specific manner. For example, claim 7 has been amended to state that the “encrypting step creates a diversified user identification number that is not predictable from one unit of real time to the next unit of real time.” This is not a function that is taught or suggested in Greenman, nor Barrett for that matter.

Applicant has also amended claim 17 in a similar manner, to state that the diversified data value is generated at a remote computer by using the user’s identification number and an encryption seed value that is known only to the central database computer and to the electronic lock box, and that the diversified user identification number is not predictable from one unit of real time to the next unit of real time.

It should be noted that claim 17 was rejected as being obvious in view of the combination of Lavelle (US 5,923,264) and Greenman (i.e., not Barrett and Greenman). Lavelle discloses a locking system for electronic door security systems, however, it uses two different readers for enhanced security. Lavelle can also be configured for a single electronic lock assembly that may be unlocked only upon entry of both a personal access code and an electronic access code. This statement in column 7 of Lavelle appears to be the main prior art that the Examiner is citing against claim 17. However, Lavelle does not teach or suggest an encrypting step that “creates a diversified user identification number that is not predictable from one unit of real time to the next unit of real time.”

Applicant respectfully submits that amended claims 7 and 17 are not rendered obvious by the cited prior art.

Claims 1 and 13

In the above-identified Office Action, the Examiner stated that the Greenman application disclosed using “epoch time” even though Greenman never uses that terminology. Admittedly Greenman uses *time* as a concept, such as a time and date value in Greenwich Mean Time (GMT), which is certainly used in many real estate lockboxes; but this is not exactly the same thing as “epoch time” as described in the instant application.

In the present invention, epoch time has a starting value of zero (0) time units, and then counts upward at a predetermined rate. While it is true that epoch time can be related to Greenwich Mean Time if the starting moment of the epoch time function is known, epoch time nevertheless is treated differently in the present invention. In the preferred embodiment of the present invention there is an “epoch time counter” that increases as real time runs; and there is a predetermined “expiration period” can be selected by the system user, which can be defined in units of epoch time. In the invention of amended claims 1 and 13, a “cryptographic seed value” is determined by dividing the present epoch time (which is based on the epoch time counter in the preferred embodiment) by the predetermined epoch time expiration period. (It should be noted that one cannot merely divide Greenwich Mean Time by a numeric value to arrive at an expiration period value.)

In claim 1, a second present epoch time value also is determined at the “second computer circuit” and a second cryptographic seed value is determined by dividing the second present epoch time by the predetermined epoch time expiration period. This occurs at the electronic lock box (i.e., at the first computer circuit or the first memory circuit). In claim 13, there is no “second epoch time value” or “second cryptographic seed value,” since this claim only discusses an electronic lock box apparatus.

The functions of the epoch time determination and of determining a cryptographic seed value using a division calculation are discussed in the instant application on page 32, line 18 through page 33, line 7. These functions are also described in the flow charts, including FIG. 22, at steps 404, 406, 408, and 410 at the central computer, and at the lock box at steps 422, 424, 426, and 430.

The cited prior art does not perform these functions of dividing an epoch time value by a predetermined value of an expiration period, and moreover the cited prior art does not teach or suggest determining a cryptographic seed value by deriving it from this division calculation.

In view of the amendments to claims 1 and 13, Applicant respectfully submits that these claims are not obvious in view of the cited prior art.

Claim 22

The Examiner has also rejected claim 22 as being obvious in view of the combination of Lavelle and Greenman. However, claim 22 includes a function that allows the “authorized user” to set up the electronic lock box to either permit access to the secure compartment or to prevent access to the secure compartment, even when an “other user” provides a proper user’s identification code and also connects a portable memory device to the lock box. This provides an important capability that makes the lock box of claim 22 more flexible in its functionality. The Lavelle invention is *not* able to operate in the mode where it prevents access when the other user provides a proper user ID. In fact, Lavelle has the *opposite* capability: on column 7, lines 12-21, Lavelle discusses the possibility of unlocking the lock only when *both* a personal access code and an electronic access code (i.e., an integrated circuit chip) is interfaced with the electronic reader. This essentially is the opposite of the final paragraph of claim 22.

In view of these differences, Applicant has amended claim 22 so that it is in independent form. While it originally was based on claim 17, claim 22 does not include the subject matter that has been added to claim 17 by this Amendment document. Applicant respectfully submits that claim 22 is patentable in its present form, since the cited prior art does not disclose this functionality.

Conclusion

Applicant has amended the independent claims in the instant application in an effort to overcome the cited prior art, and respectfully requests the Examiner to consider these amended claims and pass them through to the allowance stage. Applicant has amended claims 5 and 12

and placed them into independent form; these claims contain allowable subject matter, and were “objected to” by the Examiner. Applicant has also placed claim 22 into independent form, and has provided arguments as to why claim 22 includes patentable subject matter.

A fee payment paper is included since Applicant has added three (3) additional independent claims, although the total claim count has not changed. The Director of Patents and Trademarks is hereby authorized to charge any underpayment or credit any overpayment of fees incurred due to this amendment to Deposit Account No. 20-0095.

Applicant respectfully requests the Examiner to favorably reconsider and allow all of the pending claims.

Respectfully submitted,
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